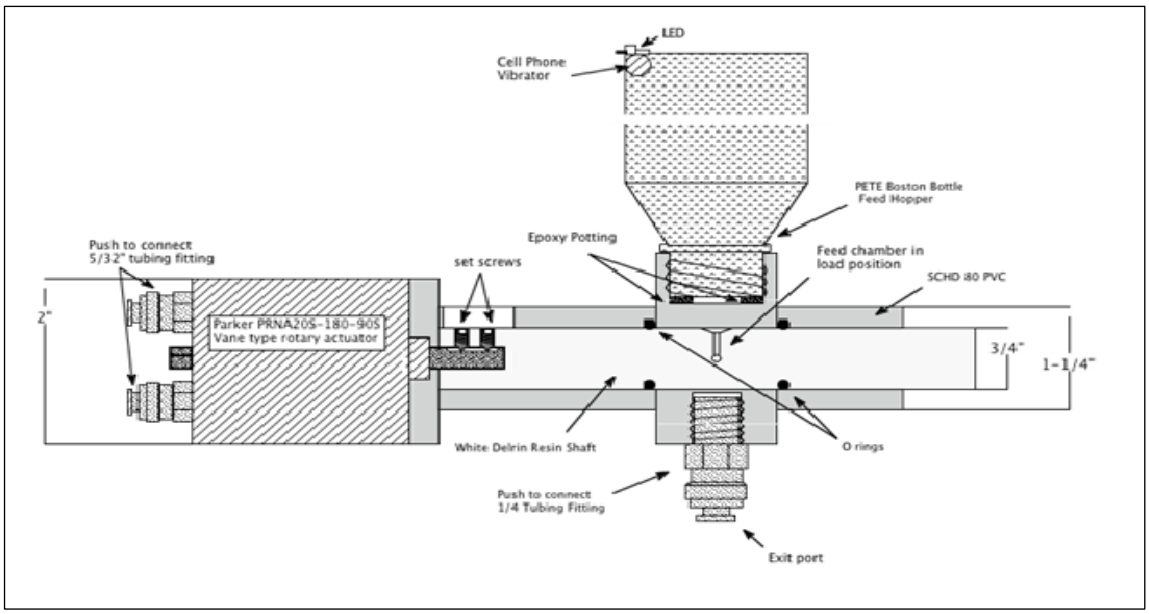
NOAA Microparticulate Fish Feeder

NOAA Innovation

Function:

NOAA's Patent Pending Microparticulate Feeder for Larval and Juvenile Fishes is capable of delivering a small (ca. 15mg) precise dose of microparticulate (ca. 100 µm diameter) feed to selected locations, via pneumatic conveyance and control. When not in use, the feeder is sealed, and the feed protected from moisture and ambient oxygen.

The Feeder uses a manifold delivery system attached to a central dispensing unit. Thus, one feeder can feed several fish tanks. The feeder dispenses a discrete volume of feed, determined by a chamber in a rotating shaft. The feed is loaded into the chamber by gravity from a sealed hopper above the chamber. A small vibrator, attached to the hopper, aids in settling the feed into the chamber. The chamber is connected to an L-shaped airway radially situated through the shaft. The chamber is isolated from the bearings by seals.



Product Specifications:

- The NOAA Microparticulate Fish Feeder is able to overcome the environmental challenges that lead to inconstant rationing and reduced feed quality associated with other feeders.
- By separating the dosing dispenser from the terminal delivery, the feed can be protected from the humid environment above the fish tank.
- In tests of the manifold system, a standard deviation of 1.3% was achieved after 200 rations delivered to each of two terminal valves, ten cycles, over five hours.
- An optional dry nitrogen injection between feedings is possible, to ensure a dry, inert atmosphere within the conveyance tubing, and the dispensing unit.

NOAA Technology Partnerships Office
Promoting Partnership & Commercialization of NOAA Innovations
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